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MONTANA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL SCIENCES

Monthly Activities Report
of the Air Quality Bureau

STATE DOCUMENTS

July, 1977

1 SEP 20 '77

1. Highlights

Organizational Committee meeting was held for the MAPS project. Five committees were involved; a general meeting was held including all five committees, then each group broke into its own session. The committees are: Health Effects, Air Monitoring, Emission Inventory, Statistical Analysis, and Modeling and Meteorology.

A significant amount of time was spent revising existing regulations. Meetings will be held to involve industry, the public, and the Air Pollution Advisory Council before these rules are proposed to the Board of Health.

An amended version of the open burning rule was passed by the Board.

2. Ambient Air Quality Network

a. Standards Exceeded

SO_2 ambient air quality standards near Helena

State 1 hr.	1
State 24 hr.	0
Fed. 24-hr.	0
Fed. 3-hr.	3

SO_2 ambient air quality violations near Anaconda Smelter

State 1-hr.	100
State 24-hr.	15
Fed. 24-hr.	8
Fed. 3-hr.	17

b. Air Stagnation Advisories:

None in July

c. Laboratory Status:

Total determinations for month	409
Total samples for month	204
Total determinations for FY 77	3091
Total samples for FY 77	2668

3. Construction Permits and Tax Credits:

Construction Permits, Applications:

Zook Brothers, Flathead County, hot mix plant
Montana Dakota Utilities, Glendive, combustion gas turbine package power plant

3. Construction Permit Applications, Cont.

James W. Zion, Richland County, gravel crushing plant
Peter Kiewit Sons, Mineral County, hot mix plant
Peabody Coal, Colstrip, load out facilities
Zook Brothers Construction, Mineral County, hot mix plant
Earth Builders, Inc., Carter County, gravel crushing plant
Earth Builders, Inc., Daniels County, hot mix plant
Earth Builders, Inc., Carter County, hot mix plant
Meyer Construction, Carbon County, gravel crushing plant
Meyer Construction, Flathead County, hot mix plant
Hilde Construction Company, Treasure County, gravel crushing plant
Hilde Construction Co., Treasure County, hot mix plant
R. J. Studer & Sons, Treasure County, hot mix plant
Meyer Construction Co., Beaverhead County, hot mix plant
Exxon Company, Billings, hot oil heater
Meyer Construction, Carbon County, gravel crushing plant
J-B Company, Sheridan, vats, crusher
W. R. Grace & Co., baghouse transfer points, Libby, $73,000

Construction Permits, Approved:

Zook Brothers, Deer Lodge County, hot mix plant
Pfizer Inc., Dillon, central vacuum system
Zook Brothers, Deer Lodge County, crushers
James W. Zion, Richland County, gravel crushing plant
Peter Kiewit Sons, Mineral County, hot mix plant
Zook Brothers, Flathead County, hot mix plant
Pfizer Inc., Dillon, replacement of shaker
Meyer Construction, Beaverhead County, hot mix plant
Meyer Construction, Flathead County, hot mix plant
Zook Brothers, Flathead County, hot mix plant
R. J. Studer, Treasure County, hot mix plant

4. Variance Status

Current:

SO_2 variance for the Anaconda Company was renewed at the January 21 Board meeting. It expired June 30, 1977. A request for renewal has been received and hearing is scheduled for the September Board meeting.

ASARCO, Inc., is seeking an extension of their variance which expired June 30, 1977. They are seeking a variance from MAC 16-2.14(1)-S1470, Sec. 2, Sulfur Oxide Emissions. Request for a hearing will be heard September 30, 1977.

Anaconda Aluminum Co., Columbia Falls, F^- and particulate, renewal granted July 22, expires June 30, 1978.

New:

Anaconda's application for a variance from the visibility rule for the smelter has been scheduled for the September 30 Board meeting.

5. Enforcement Actions

a. Citations

Riteway Asphalt, Butte, Montana, 770729-BR-1; batch plant in violation of rule 16-2.14(1)-S1460 (Visible Air Contaminants)

Faunco, Inc., Roundup, 770722-BR-2; open burning - burning of a sawdust pile in violation of rule 16-2.14(1)-S1490 (Open Burning Restrictions)

ASARCO, East HElena, 770708-HK-1-770708-HK-18 (18 citations); smelter in violation of federal 24-hour and 3-hour sulfur dioxide ambient standards

b. Notice of Violation:

None in July

c. Order for Corrective Action:

The provision of Gilman's Order of Compliance dated November 22, 1976 has not been completed due to mitigating circumstances. Final compliance should be achieved by September 1.

Stauffer Chemical continues to be on schedule for completion of compliance project called for in March 17, 1976, Board of Health Order. Investigations are continuing, report on each investigation is on file.

d. Court Actions

None in July

6. TP Burner and Open Burning

Tepee Burner Inventory

No. at start	39
New starts	0
Shutdowns	0
No. at end	39

Open burning permits issued

Cascade County	2	Sanders County	31
Flathead County	31	Yellowstone County	13
Lake County	0	Rest of State	287
Missoula County	4	Total	368

Open Burning:

Amended version of rule passed by Board of Health.

7. Source Tests Performed

a. Agency Source Tests:

None in July

7. Source Tests Performed (Cont.)

b. Non-Agency Source Tests:

Hoerner-Waldorf, Missoula, 17 particulate tests on recovery boilers, lime kilns, slakers, smelt tanks and hogged fuel boiler.

Anaconda Aluminum, Columbia Falls, 90 fluoride tests on scrubber towers.

Champion International, Bonner, particulate test on boiler #2

Colstrip performance tests

Meyer Construction Company, asphalt plant

Montana Sulphur and Chemical Company, tail gas incinerator.

8. Field Investigations

Anaconda Aluminum, Columbia Falls, reduction cells, inspection, in compliance
Pack & Co., Kalispell, asphalt plant, inspection, not operating
Plum Creek Lumber, Columbia Falls, fiberboard plant, inspection, dryer exhausts in violation, Order being prepared
U.S. Gypsum, Heath, plant inspection, out of compliance due to broken bags in baghouse, scheduled for repair within a week
Central Montana Hospital, Lewistown, incinerator, inspection
Rite-Way Paving, Butte, smoke test, citation
Colstrip Units 1 and 2, Colstrip, inspection
Barry O'Leary, Billings, asphalt plants, in violation of opacity regulations
Meyer Construction, Hardin, asphalt plant, violation of opacity and mass loss standards
Corette Plant, Billings, inspection
Peabody Coal, Colstrip, inspection of crushing and storage loading facilities
Jesse March, Sheridan, hog farm, odors, followup letter with suggestions
Don Allen, Beaverhead Road, Helena, fugitive dust,investigation, followup letters and phone calls
Faunco, Inc., Roundup, open burning, sawdust pile, citation, possible court action
Riverside, Beghardt, Yount's and Sealey Sawmills, Roundup, investigation
Fort Kalispell, Kalispell, burning garbage in open pit, burial of pit completed upon inspection
American Timber, Eureka, inspection, in compliance
Ksanka Lumber, Fortine, inspection, in compliance
Kennedy-Stevens, Eureka, inspection, in compliance
Pack & Co., Kalispell, cement plant, inspection, in compliance
C & C Plywood, Kalispell, documentation, in compliance
StoltzeLand & Lumber, Columbia Falls, tepee burner, documentation, in compliance
Louisiana-Pacific, Columbia Falls, tepee burner, documentation, in compliance
Superior Building, Columbia Falls, tepee burner, inspection
Zook Brothers, Essex, hot batch plant, inspection
Plum Breek, Pablo, tepee burner, documentation, in compliance

9. Complaints

Yellowstone Pine, Belgrade, smoke, investigation
Faunco, Inc., Roundup, burning feedlot, investigation
Beaverhead Road, Helena, road dust, investigation
Crude oil tank battery, Sidney, H_2S concentrations, corrective action to be taken
Jesse March, hog farm, Sheridan, odor, investigation
South of Kalispell, lightning fire in 75 tons of hay, investigation, smoke was being suppressed

10. Data Processing Services

a. Ambient Data Summary:

See attached

b. Emission Inventory Status:

One update to the emission inventory computer system was processed.

c. Prevention of Significant Deterioration:

No significant activites were done in this area in July.

d. Modeling:

A significant portion of time was spent on the Billings AQMA sulfur dioxide modeling. A summary report is being written.

11. Environmental Impact Statements

a. Agency Impact Determinations

None in July

b. Other Agency EIS's Reviewed:

We have joined the Department of State Lands in writing a joint EIS for Federal Bentonite Company mine and drying plant near Glasgow. Draft to be released in August.

12. Status of Studies, Contracts and Reports

MAPS - Attended meeting with GCA concerning health aspects
MAPS - Organizational Advisory Committee Meeting held July 27
ASARCO Troy Project, background air quality, second station operational
Rockwell International has responded to contract proposal to evaluate Anaconda's in-stack instruments. Contract to be final in August.
Evaluation of modeling for Anaconda smelter is expected to be complete in late September.

13. Schools and Training

None in July.

14. Public Hearings and Meetings

a. Public Hearings Held

Board of Health meeting held on July 22.

b. Meetings Attended:

Attended meeting with Western Energy Company on sampling network and data processing information.

Attended meeting of Indian students in Colstrip on air monitoring being done there.

Met on July 5 with Great Western Sugar, Exxon, and Montana Sulphur and Chemical on Billings AQMA SO_2.

Met with GCA regarding MAPS.

Met with Anaconda Company in Helena to discuss problem areas, SO_2 variance hearing and promulgation of rules for smelter emissions.

Met with representatives of Federal Bentonite Company, Econ, Inc., and Dept. of State Lands to resolve schedule problems for mining plant.

Met with Assistant County Attorney, Flathead County, regarding open burning rule change.

c. Intra-Staff Meetings:

Met on Billings AQMA SO_2
Met on open burning and air stagnation manual
Met to discuss new rule changes
Met to discuss MAPS
Met on air stagnation advisories

15. Public Information Requests

Rules and Regulations	17
Clean Air Act	5
General Information	6

17. Other

Hospital in Glasgow has been requested to submit construction permit application on incinerator. No response received. If installation of incinerator is verified, citation will be issued.

MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

June 1977

Pollutant: TSP Units: ug/cu meter

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
140	Carbon Mon. Big Horn Co.						
	Warren Ranch						
	Big Horn Co.	40	51	146	17.2	6	
	Englewood School						
	Billings	66	137	137	46.5	6	
	CMHL						
	Billings	50	163	163	39.3	6	
	City Hall						
	Billings	67	165	165	64.5	6	
	Grand Ave. School						
	Billings	135	155	155	58.1	6	
	Laurel Jr. High						
	Laurel	58	150	150	39.6	6	
141	Hospital Roof						
	Great Falls	109	225	225	48.0	6	
	Fire Sta. #1						
	Great Falls	73	869	869	81.8	6	
142	Hiway Jct						
	Anaconda	58	121	250	46.8	6	
	McKinley Res.						
	Granite Co.	88	90	94	40.5	6	

Pollutant: TSP Units: ug/cu meter

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
142	Microwave						
	Jefferson Co.	50	103	103*	26.8	6	
	210 East Pacific						
	Lewis & Clk. Co	105	149	187	69.8	6	
143	Shelaka						
	Carter Co.						
	Littlefield Hill						
	Miles City	38	38	50	12.1	6	
	Glendive						
	Dawson Co.	36	102	102	26.1	6	
	Ft. Peck						
	McCone Co.						
	Broadus						
	Powder Riv. Co.	40	275	275	27.2	6	
	BM Site						
	Colstrip	59	93	93	36.7	6	
	McRae Site						
	Colstrip	28	102	102	18.7	6	
144	High School						
	Col. Falls	247	247	294	107.2	6	4 excur Fed. Sec
	Courthouse						2 excur Mt. Std.
	Missoula	128	295	342	98.6	6	
	JB Field						
	Missoula Co.	120	140	214	52.0	6	
	Frenchtown						
	Missoula Co.	83	255	255	48.8	6	
	Kalispell						1 excur Mt. Std
	Flathead Co.	226	226	226	95.3	6	1 excur Fed. Sec Std.
	Troy						
	Lincoln Co.	64	122	122	43.7	4	

Pollutant: Misc. Cont. Data Units

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
140	Carbon Monoxide						
	27th & Montana						
	Billings	------	------	******	------	------	
144	Malfunction Jct.						
	Missoula	13.60	17.50	17.50	4.953	5	7 excur Natl. 8 hr.
	Hydrocarbons						
140	27th & Montana						
	Billings	6.90	6.90	10.20	2.197	6	169 excu Mt. Std.
143	BM Site						
	Colstrip	------	------	---*	------	------	
	Meth-Hydrocarbons						
143	BM Site						
	Colstrip	------	------	---*	------	------	
	Nonmeth - HC						
143	BM Site						
	Colstrip	------	------	---*	------	------	
	Nitric Oxide						
143	BM Site						
	Colstrip	0.08	0.08	0.08	0.005	3	
	Nitrogen Dioxide						
140	27th & Montana						
	Billings	0.04	0.08	0.11	0.012	6	
143	BM Site						234 excur Nat'l
	Colstrip	0.11	0.11	0.11	0.018	6	Pri & sec Std.

Pollutant: Misc. Cont. Data Units:

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
143	Oxides of Nitro.						
	BM Site						
	Colstrip	0.10	0.10	0.10	0.011	3	
	Ozone						
140	27th & Montana						
	Billings	0.08	0.08	0.08	0.019	6	
143	BM Site						407 excur Nat.
	Colstrip	0.14	0.14	0.14	0.054	6	Pri & Sec. Std.
	Sulfur Dioxide						
140	27th & Montana						
	Billings	------	------	---**	------	------	
	Laurel Farm						
	Billings	0.63	0.63	0.80	0.056	6	9 excur Mt. 1 hr.
142	East Stack						
	E. Helena	0.44	0.44	0.44	0.013	6	3 excur Mt. 1 hr.
	Microwave						1 excur Nat. Sec.
	E. Helena	1.40	1.40	1.40	0.011	6	1 excur Mt. 24 hr
	Saddle Mtn.						
	E. Helena	0.47	0.78	0.78	0.012	6	3 excur Mt. 1 hr.
	Cogswell Bldg.						
	Helena	0.14	0.40	0.40	0.006	6	
	C-Hill						
	Anaconda	------	------	---***	------	------	
	Hi-way Jct						
	Anaconda	------	------	---***	------	------	
	Hill Crook						
	Anaconda	------	------	---***	------	------	
	Post Office						
	Anaconda	0.74	1.05	1.05	0.011	6	9 excur Mt. 1 hr
143	BM Site						
	Colstrip	0.16	0.16	0.16	0.013	6	1 excur Mt. 24 h

****** Data not available at time of report

* equipment down- no data

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MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

MONTHLY SUMMARY OF AIR QUALITY DATA

June 1977

Pollutant: Misc. Indicators — Units:

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
143	Fluoride Papers						
	Whitehorse						
	Powell Co.			***			
	Lehman's						
	Powell Co.			***			
	N. 3e Hwy.						
	Powell Co.			***			
	Ramsay West						
	Sil. Row C.			***			
	YSR Stauffer						
	Sil. Row Co.			***			
143	BH Site						
	Colstrip			***			
	McHag Site						
	Colstrip			***			
144	Bohlkema Mt. Box						
	Flathead Co.	0.740	1.610	1.710	0.718	6	
	Anaconda South						
	Flathead Co.	5.120	7.550	7.550	3.612	6	
	Glac. Park #1						
	Glac. Nat. Pak.	0.320	0.330	0.400	0.278	6	
	Glac Park #2						
	Glac. Nat. Park	0.390	0.500	0.530	0.396	6	

Pollutant: Misc. Tnd. — Units:

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
144	Fluoride Plates	- to	Zero	180 day			
	Grant Canyon						
	Deer Lodge Co.			***			
	N.3e. Hwy						
	Powell Co.			***			
	BH on Hill						
	Powell Co.			***			
	Ramsay West						
	Sil. Row Co.			***			
	YSR Stauffer						
	Sil. Row Co.			***			
143	BH Site						
	Colstrip			***			
	McHag Site						
	Colstrip			***			
144	Teakettle #6						
	Flathead Co.			***			
	Anaconda South						
	Flathead Co.	0.530	0.530	0.820	4.550	6	
	Glac. Park #1			***			
	Glac. Nat. Park						
	Glac. Park #2						
	Glac Nat. Park			***			

Pollutant: Misc. Indicators — Units

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
	Rainfall - Tons/	Sq. mi.					
141	Mountain States						
	Great Falls	27.73	48.15	48.15	26.54	6	
	Fire Sta. #1						
	Great Falls	16.42	23.75	25.93	18.61	6	
	Fairgrounds						
	Great Falls	21.81	31.46	31.46	13.82	6	
	Sulfation Rate -	mg 04/100 sq. cm					
140	1/8 mi NE Coop						
	Billings	1.250	4.380	4.800	2.445	6	
	East of Laurel						
	Billings	0.990	3.220	3.220	1.690	6	
	Mi-Ball Trucking						
	Billings	0.820	1.840	1.840	1.196	6	
141	Stock Car Track						
	Great Falls	0.243	0.607	0.607	0.347	6	
	Phillips Ref #1						
	Great Falls			***			
	Phillips Ref E						
	Great Falls	0.251	0.575	0.575	0.313	6	
142	Microwave						
	E. Helena	0.470	0.650	0.650	0.385	6	
	Mi Way Jct						
	Anaconda			***			
	C-Hill						
	Anaconda			***			
143	BH Site						
	Colstrip			***			

Pollutant: Misc. Bubbler Data — Units: ppm

AQCR	AREA Site Location	HIGH READING Current Month	Year-to-Date	Running Year	ARITHMETIC AVER. Year-to-Date	No. of Mons. of Data	Comments
	Sulfur Dioxide						
140	Lockwood School						
	Billings	0.0237	0.0611	0.2012	0.0184	6	
	7/8 mi NE Coop						
	Billings			***			
143	Scobey						
	Daniels Co.	0.0	0.0	0.0	0.0	6	
	Ft. Peck						
	McCone Co.			***			
	Lone Deer						
	Rosebud Co.			***			
	BH Site						
	Colstrip			***			
	Nitrogen Dioxide						
143	Scobey						
	Daniels Co.	0.0	0.005	0.008	0.0093	6	
	Ft. Peck						
	McCone Co.			***			
	Lone Deer						
	Rosebud Co.			***			
	BH Site						
	Colstrip			***			

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